

Appln No. 09/550,757

Amdt date October 15, 2003

Reply to Office action of July 24, 2003

REMARKS/ARGUMENTS

Claims 30-95, and 97 are pending. Claims 30, 40, 50, 60, 68, 78, 86, and 97 are amended. During a telephone conversation with the Examiner on June 26, 2003, a provisional election was made without traverse to prosecute the invention of Group I (claims 30-95, and 97). Accordingly, claim 96 is cancelled. Applicants reserve the right to prosecute the cancelled claim 96 in a Divisional application.

The drawings are objected to as failing not to comply with 37 CFR 1.84(p)(5), because they include some reference signs not mentioned in the description. The specification is amended to include all the missing reference signs. Consequently, it is respectfully requested that the above-mentioned objection be withdrawn.

The specification is objected to because of informalities. The specification is amended to correct the informalities. Therefore, it is respectfully requested that the above-mentioned objection be withdrawn.

Claims 30-32, 36, 37, 40-42, 46, 47, 50-52, 56, 57, 68-70, 74, 75, 86-88, 92, 93, 97 are rejected under 35 U.S.C. 102(e) as being anticipated by Langberg et al (U.S. Patent 6,243,425). Claims 33-35, 38, 39, 43-45, 48, 49, 53-55, 58-67, 71-73, 76-85, 89-91 and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langberg.

Independent claims 30, 40, 50, 60, 68, 78, and 86, include among other limitations, "a coefficient ramping circuit configured to provide a ramped output for a decision feedback filter tap coefficients, the ramped output being varied over

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time from a predetermined first value to a second value." Independent claim 97, includes among other limitations, a "precoder having tap coefficients which are ramped over time from a first predetermined value to a second value, the second value being dependent upon a decision feedback filter tap coefficient."

Langberg describes an adaptive precoding system for a communication channel. A "[c]onverter 130 (FIG. 6) determines an updated set of precoder values based on the equalizer coefficient values and the current precoder values. In order to enable the ISI filter 64 to track the changes, converter 130 slowly updates the precoder values. This is preferably done by incrementing each precoder value in a plurality of increments until each precoder value corresponds to the new set of precoder values or until the next set of equalizer coefficients is received. For example, assume for illustrative purposes only that converter 130 determines that a current precoder value of five (5) needs to be updated to a new precoder value of six (6). Instead of simply replacing the current precoder value with the new precoder value, converter 130 initially increments the current precoder value (5) to a value between five (5) and six (6). By continuously updating the current precoder value in this manner, the value of six (6) is eventually reached." Col. 6, lines 7-23, emphasis added.

Therefore, the converter of Langberg does not disclose "the ramped output being varied over time from a predetermined first value to a second value," as required by the independent claims 30, 40, 50, 60, 68, 78, 86, and 97. Rather, the converter of

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Langberg "slowly updates the precoder values" from a previous value (that is dependent on equalizer coefficients and are not predetermined) to a new value. As a result, the independent claims 30, 40, 50, 60, 68, 78, 86, and 97 are not anticipated by Langberg.

In short, the independent claims 30, 40, 50, 60, 68, 78, 86, and 97 define a novel and unobvious invention over the cited reference. Dependent claims 31-39, 41-49, 51-59, 61-67, 69-77, and 79-85 are all dependent from claims 30, 40, 50, 60, 68, 78, and 86, respectively and therefore include all the limitations of their respective independent claims and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent from allowable independent claims and for the additional limitations they include therein.

In view of the foregoing remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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